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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,615	08/26/2003	Kouichi Hashimoto	03115.030001	4383

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7590 11/12/2004

EXAMINER

LOPEZ, MICHELLE

ART UNIT PAPER NUMBER

3721

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,615

Applicant(s)

HASHIMOTO ET AL.

Examiner

Michelle Lopez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-18 is/are rejected.
- 7) ☒ Claim(s) 4-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed on August 30, 2004.
2. New claims 11-18 have been added.
3. The indicated allowability of claims 2 and 6 is withdrawn in view of the newly discovered reference(s) to Grossmann'766. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3 and 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "the mating teeth" in line 1.

Claim 7 recites the limitation "the other gear" in line 2.

There is insufficient antecedent basis for these limitations in the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmid (4,537,264).

Schmid'264 discloses a hammer drill comprising a motor 2; a connector shaft 10 driven rotationally by said motor; a spindle 30 capable of holding said drill bit via a chuck 8, wherein the rotational force through said connector shaft is propagated; a motion converter mechanism 21 for converting the rotational force of the said connector shaft to a reciprocating force in the axial direction in said spindle; a percussive member 23 for applying a percussive force in the axial direction to the drill bit held in said spindle based on the reciprocating force converted by said motion converter mechanism; a percussive force converter 43 disposed between said motor 2 and said connector shaft 10.

It is deemed that the percussive force converter mechanism 43 changes the rotational speed of the motor 2 and the shaft 10, as been well-known and old in the art to have provided a speed reduction mechanism via a gear mechanism.

6. Claims 1, 11-16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Grossmann (4,418,766).

With regards to claims 1 and 11, Grossmann discloses a hammer drill comprising a motor 14; a connector shaft via 26 driven rotationally by said motor; a spindle at the forward end of 26 capable of holding a drill bit via a chuck (not shown numerically), wherein the rotational force through said connector shaft is propagated; a motion converter mechanism via a cam member for converting the rotational force of the said connector shaft to a reciprocating force in the axial direction in said spindle (see Abstract); a percussive member 92 for applying a percussive force

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in the axial direction to the drill bit held in said spindle based on the reciprocating force converted by said motion converter mechanism; a percussive force converter via 34,36,38 disposed between said motor 14 and said connector shaft 26, wherein the converter mechanism changes the rotational speed of the motor 14 and the shaft 26.

With regards to claim 12, Grossmann'766 teaches a connector shaft 26; shaft 68 with a pinion having a plurality of gear portions 70,74 in different diameters, provided on an axle of a motor; gear teeth provided around said connector shaft; a plurality of gears 34,38 meshing with the plurality of gear portions of said pinion respectively, configured to reciprocate along said connector shaft wherein one of said plurality of gears selectively meshes with said gear teeth of said connector shaft

With regards to claim 13, Grossmann'766 teaches a plurality of gears 34,38 with inner gear teeth to be selectively meshed with said gear teeth at the vicinity of 46 of said connector shaft 26.

With regards to claim 14, Grossmann'766 teaches that the plurality of gears 34,38 are configured to concentrically rotate on said connector shaft.

With regards to claim 15, Grossmann'766 teaches that each of said plurality of gears 34,38 is disposed at an interval in the axial direction of said connector shaft 26.

With regards to claim 16, Grossmann'766 teaches a gap formed between the gears.

With regards to claim 18, Grossmann'766 teaches a shifting switch "32" operatively connected to said connector shaft, wherein one of said plurality of gears selectively meshes with said gear teeth of said connector shaft 26 by operation of said shifting switch.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made..

7. Claims 2, 6, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grossmann (4,418,766) in view of Japan Patent No. 2595262.

With regards to claim 2, Grossmann'766 discloses that the converter mechanism is a transmission mechanism wherein one of a plurality of gears 36 which receive the rotational force from the motor in order to rotate can move freely in the axial direction of the connector shaft 26 (claim 2).

Grossmann'766 does not disclose that the gear 36 is selectively meshed by the force of a spring to gear teeth on the connector shaft.

However, Japan Patent No. 2595262 teaches a gear change mechanism 6 and a spring 65 axially biasing the gear change mechanism and selectively meshing the gear change mechanism to a gear teeth on a connector shaft 23 for the purpose of changing the connector shaft 23 rotational speed force. In view of Japan Patent No. 2595262, it would have been obvious to one having ordinary skill in the art to have provided Grossmann's invention with a gear change mechanism forced by a spring for biasing the gear mechanism and selectively meshing the gear mechanism to a gear teeth on the connector shaft in order to change the connector shaft rotational speed force.

With regards to claims 6 and 17, Japan Patent No. 2595262 teaches a sleeve 64 affixed to the connector shaft 23, where said sleeve is equipped with the spring 65 that provides a force on said gear mechanism 6 for biasing the gears.

Allowable Subject Matter

8. Claims 3 and 7-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

9. Claims 4-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

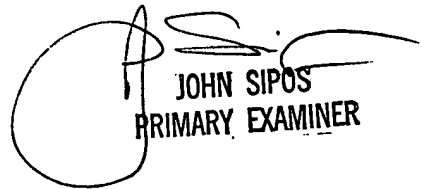
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Moldan'588 et al. is cited to show related inventions.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Lopez whose telephone number is 571-272-4464. The examiner can normally be reached on Monday - Thursday: 8:00 am - 6:00 pm.

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13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML



JOHN SIPOS
PRIMARY EXAMINER